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EAT FOREST FIRES OF AMERICA



BY JOHN D. GUTHRIE, INSPECTOR



UNITED STATES DEPARTMENT OF AGRICULTURE

U.S.D.A.
L.I.B.

FOREST SERVICE

HOW TO PUT OUT YOUR CAMPFIRE

- 1 Stir the coals while soaking them with water.
- 2 Turn small sticks and drench both sides.
- 3 Wet the ground thoroughly around the fire.
- 4 Drown out every spark.

**Then — POUR ON SEVERAL
MORE BUCKETS OF WATER**



If Fire Can Catch a Deer . . .



. . . What Chance Has Small Game in a Forest Fire?

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GREAT FOREST FIRES OF AMERICA

By John D. Guthrie, *Inspector, United States Forest Service*

SOMEONE has said that as a calamity, great fires rank with floods, pestilence, famine, or earthquake—but they are soon forgotten.

To stage a forest fire you need only a few things—a forest, the right atmospheric conditions, and a spark, either from a lightning bolt or a match in the hands of a fool or a knave. The formula is simple; the wonder is that we do not have more and bigger fires. The larger the forest, the drier the air, the bigger the fool, the bigger the fire you will have.

When Europeans first landed on these shores there were surely enough "forests to burn" and the white man began at once to burn them. It has long been the practice to lay the blame for forest fires of early days to the Indians, to prate, with little or no foundation in fact or record, that the Indians wilfully burned the forests off regularly. If the American Indian did all the forest burning he is credited with there would have been few forests left in America when the first settlers landed.

Of course, there were early fires; they are recorded as scars in the hearts of many an American tree. Lightning was here long before even the red man, and with low atmospheric humidity and wind, early fires swept over many portions of our forested regions.

The California big trees show great fires as far back as 245, and again in 1441, in 1580, and 1797. Extensive fires swept Colorado in 1676, 1707, 1722, 1753, and 1781, for her Engelmann spruces still show the scars. Maine white spruces tell of a fire about 1795 which must have covered some 200 square miles.

The pages of European forest history are also blackened here and there with forest smoke. About 1800, there were fires in western Europe for a part of the Black Forest in Germany was burned. In 1826, extensive forest fires swept over portions of Sweden and Denmark. "Dark Days" are scattered through history, usually due to large forest fires though in some cases to volcanic eruptions. Such days on the Pacific coast are still fresh in the memories of many of its citizens. "Red rains", "black rains", "black snows" are recorded in Europe from 1803 on. But Europe can show no great forest fires, no paltry million acres burned, no holocausts, such as we profligate Americans must admit having. We found a continent woodied; we have hacked and felled and burned the forest back. It was something to be got rid of for, we said, within its depths there might be wild animals and treacherous human

enemies; besides we might need the land for crops and homes. The forest was limitless, it had no value, and so we burned and burned, from the Atlantic to the Pacific.

But one day we saw the forests dwindling, we had more cleared land than we were cropping, the forest began to have a value for many different things; gradually it became attractive, and then, as mankind is wont to do, we excused our forebears—it was the Indians who used to burn the forests!

Our list of gigantic forest fires is a long one. Their records are stories of appalling loss of real wealth, of the cremation of countless wild creatures, of charred human corpses, a story of roaring thunder, of darkened skies at midday, of blackened and cindered remains of what was forest green.

The details which have come down to us are meager, but appalling withal. Let's glance over a few, starting in 1825, setting them down in chronological order if not in geographical relation.

The Miramichi fire of October 1825 in Maine and New Brunswick swept over 3,000,000 acres, and took its toll of 160 human lives.

On the other side of the continent, David Douglas, the young Scottish botanist, exploring in Oregon from 1826 to 1830, speaks in his journal of seeing forest fires near Oregon City and south through the Willamette Valley. In 1846 came the Yaquina fire in Oregon covering 450,000 acres of probably what was as heavy stands of Douglas fir, Sitka spruce, and western cedar as could be found on the Pacific coast.

Seven years later, in the same region, came the Nestucca fire on the Oregon coast which covered 320,000 acres. In May 1853 the Pontiac fire in Quebec had burned 1,600,000 acres.



No living thing here.

F-11439A



F-234219

Many nests are destroyed even by ground fires.

F-234221

The Silverton fire of 1865, again in Oregon, is said to have covered probably 1,000,000 acres. That summer was very dry. Settlers in Silverton read newspapers at night by its light. The air was filled as if with a dense fog, and the ashes on the burned area were 8 to 10 inches deep. It is recorded here that it was common practice then for settlers to fire the forests as they had no value.

In September 1868 came the Coos fire in the Oregon coast region, when more than 300,000 acres were burned from September 15 to October 20. That same year occurred the St. Helens fire, in September, which covered over 300,000 acres. "Dark days" were recorded in western Oregon and Washington and smoke was encountered far out in the Pacific Ocean.

Wisconsin now presents a claim in the Peshtigo fire of October 1871. This fire was one of the most calamitous in American history. A total of 1,280,000 acres was burned over, homes, towns, settlements swept away, and 1,500 persons lost their lives. The Big Horn fire in Wyoming comes next in 1876, with over 500,000 acres burned. Michigan's fire of 1881 is next. A million acres were burned, with a property loss of \$2,000,000, and 138 people were burned alive.

In Wisconsin, also, occurred the Phillips fire of July 1894 when 100,000 acres were burned and more than 300 persons killed. In September of that same year, the great Hinckley, Minn., forest fire occurred. Millions of acres were laid waste, some 12 towns wiped out, 160,000 acres of forest burned, and 418 lives lost. The smoke from the Phillips and Hinckley fires that year was so dense on the Great Lakes as to interfere seriously with the movement of vessels. From April to June 1903 occurred the Adirondack, N. Y., fire, where 450,000 acres were burned over.

The year 1910 is historic throughout the west as one of unprecedented forest fires. Minnesota, Idaho, Washington, and Oregon all had tremendous losses. The Baudette fire in Minnesota in October burned 300,000 acres and destroyed 42 lives. Washington and Oregon lost millions of acres. Smoke was sighted 300 miles out at sea. It is reported that the wind was so strong that in some cases the fire was actually blown out. The British ship *Dumfermline* reported the smell of smoke 500 miles west of San Francisco and a haze interfering with nautical observations for 10 days. During August 1910 Idaho suffered worst of all. Two millions of acres of white-pine timber were burned, towns were destroyed, and 85 lives were snuffed out. Many heroic deeds are recorded.

The year 1910 was unusually dry in Idaho. No spring rains fell. The drought continued through June, July, and August. Dry electrical storms occurred. By July 15 more than 3,000 fire fighters were at work in northern Idaho and northern Montana. By the middle of August over 3,000 small fires had been put out in this territory and about 90 large fires had been put under control, only to be fanned into flame again by high winds.

Then came Saturday, August 20. That afternoon a hurricane arose. Whole hillsides of timber were uprooted by it. Forest rangers were almost blown from their saddles. For 24 hours the gale raged, and every little smoldering fire in all that country was fanned into life, and the whole region became a raging torrent of flames, jumping rivers a quarter of a mile wide. The rangers said the roar sounded like a thousand freight trains passing over that many steel trestles. Seventy-four fire fighters were burned to death. By August 21 a strip of country 120 miles long by 20 to 35 miles wide had been burned.



Killed in the war on forest fires.

F-157545



After the Cloquet fire.

F-35448

Ranger E. C. Pulaski, with 45 fire fighters, was caught in a gulch. Fires were coming at them from all sides. Pulaski discovered an old mine tunnel on the mountain side and took his men in, hanging wet blankets over the entrance. Flames swept over the tunnel. Heat, smoke, and gases crept in. Panic seized the men; one man started to bolt for the outside. The ranger pulled his gun, saying he would shoot any man trying to leave. Pulaski stood near the entrance until overcome by gas and heat he fell exhausted. One of the men took his place until flames had passed on, and the party emerged after their 2-hour rendezvous with death.

While the World War was being fought out to its sudden close in October 1918 the Cloquet fire in Minnesota was staging a miniature war's red hell. A shortage of 20 inches of rainfall in 20 months was the prelude. Somebody didn't put out a cigarette before throwing it away, a campfire was left unextinguished, someone was foolish enough to burn brush in such weather—anyway, the fire started on the afternoon of October 12, the wind came up, and soon Cloquet, the busy sawmill town of 12,000 people was burned, razed to the ground. All of the inhabitants except seven were rescued, taken out by train to safety, though property and timber valued at \$30,000,000 were lost. The city of Duluth was seriously threatened by this fire. In the fires of that general region, out in the country and in smaller settlements, 400 lives were lost.

And now let's look back to 1902 again at what is variously called the Lewis River fire, the Columbia, Cispus, Yacolt, or Cowlitz fires. This fire swept from the Kalama River in Cowlitz County south through

Clarke and Skamania and east to the Wind River Valley, all in Washington. South of the Columbia River, in Oregon, fires swept from the river southward through Multnomah and Clackamas Counties to the Molalla River.

Here again the atmospheric stage had been set for a conflagration. The fire occurred in September—and it may be remarked that the most destructive fires in the Pacific northwest region have been in September. The summer had been deficient in rainfall. High temperatures, dry air, and light winds for almost 4 months previously. The earth was parched, crops had failed, vegetation had dried up, down timber and snags were as tinder. High winds from the east ushered in September.

Fires had been burning near Silver Star Mountain in Cowlitz County for over a month previously; no one paid any attention. Careless settlers were burning slash in many places. Another fire had been burning on Muddy Creek, a tributary of Lewis River.

On September 8 and 9 these fires crept out through a number of gaps in the first range from Washougal to North Fork Lewis, and from then until September 15 the people of Clarke and Cowlitz Counties did little else but fight fire day and night. September 12 was "a dark day" in western Washington. More than 600,000 acres were burned, the property loss was placed at \$12,000,000, and 18 people were killed.

Along the North Fork of Lewis River the fire on September 11 probably reached its greatest severity. Here a party of nine people was



A worthless carcass.

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overtaken by the flames. They had been camping at Spirit Lake, and hurrying ahead of the coming fire, they found the narrow road blocked with fallen timber. The fiery hurricane closed in around them. Nine charred corpses lay close together, and nearby a few pieces of iron, all that was left of their wagon. The horses had broken loose, but a shapeless mass and a few buckles told the tale of them. A settler's wife and children were caught as they ran from the clearing into green timber. A mail carrier was overtaken on the road—and perished. In all, 16 lives were lost on the North Fork of Lewis River.

Millions of feet of some of the finest timber in the northwest were destroyed, and sawmills, logs, railroad ties, settlers' homes, bridges, mining buildings, and countless numbers of wildlife were wiped out.

Many carcasses of deer were found afterward, while the loss of smaller game such as grouse, squirrels, and rabbits was very great. In one wet meadow some people took refuge; there also were six bear, eight deer, and a lynx. In a clearing where several families took shelter, a number of deer came and sought refuge with them. As food supplies became low, one of the men had to shoot one of the deer. He said afterward that he would much rather have stolen that much food than to have had to kill this deer—he felt almost as if he were killing a brother!

It was from this fire, however, that organized forest-fire protection agencies in the Pacific northwest date their origins. It aroused timber owners, logging operators, foresters, and others to such an extent that legislative steps toward protection of the forests followed soon after. And then various organizations to prevent and combat forest fires came into being.

Among spectacular fires of recent years was the Matilja Canyon fire of September 1932 on the Santa Barbara National Forest, Calif. This fire spread over an area 32 miles long and 8 miles wide, covering some 220,000 acres.

The fire was disastrous to watersheds of eight towns and cities and also to important irrigated lands. A total of 2,500 men fought this fire of whom 105 were forest officers working from 17 fire camps. Twelve of these camps could be reached only by packtrain and three of them were burned up. Five portable radios and two airplanes were used on this fire. There were dug 302 miles of fire lines. While there were no human fatalities, the loss of deer and quail was very heavy; 11 carcasses of deer were found in one spot and 12 along a trail.

The big Wilson River fire of August 1933 in Oregon was even more spectacular. Dry woods and east winds were the setting, when fire from friction of a steel cable passing around a stump started it off in dry slash nearby.

Discovered almost immediately and attacked by the logging crew, yet with dryness and high winds, it fanned away over the cut-over and by the end of the second day nearly 600 men were on the fire line.

Then came fog for some 5 days and things looked better; then the weather changed to very low humidity and high east winds, and the fire roared over the Oregon coast, through the finest stand of virgin timber remaining in the State.

The net area burned over in 11 days was 267,000 acres, over two-thirds virgin timber, estimated to contain 12 billion board feet, with an estimated loss to industry, the public, labor, etc., of \$350,000,000. The stumpage value alone of the timber destroyed was \$20,000,000. The amount of this fine virgin timber burned was equal to the entire timber cut of the United States in 1932, or 8 or 9 times more than the entire cut of the Douglas fir region for 1932.

Some 3,000 men fought it, including hundreds of C. C. C. boys, many of them fresh from eastern city blocks. These boys fought so well as to incite the admiration of old-time loggers and woodsmen of the Pacific coast. One C. C. C. boy was killed, and a score were injured.

So dense was the smoke-fog during the days that lights in the coast towns had to be turned on, chickens went to roost, motors crept along the roads though miles away from the fire. Enormous clouds of smoke rose to an estimated height of 40,000 feet and billowed west over the Pacific Ocean. Ashes and cinders fell 2 inches thick along the coast and were wafted out over the ocean to be washed up later in long windrows on the beach. The loss of wildlife was appalling—many charred bodies of deer were found, in most cases lying with their heads pointed toward the west as they ran to escape the racing inferno.

Can such conflagrations occur again? Much country has been cleared, there are more roads and trails, protective agencies are more numerous and better trained and equipped, there are more telephone lines and radios, more fire lookouts to pick up fires while they are still small, and the science of predicting fire weather is being perfected. All true, but look back at the statement of weather conditions in the summer of 1902! Those conditions may be repeated some time. But the people of America, you say, are more careful with fire in the forests today than ever they were in the old days? Let us hope so.

STOP FOREST FIRES!

